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JAN 24 2003

TECH CENTER 1600/2900

In the example, the method of the invention first involves identifying an mRNA target sequence and then forming forward and reverse primer nucleotide sequences coordinated with the target sequence. This is ordinarily accomplished by a software program such as GenBank-

Entrez. The target sequence of the cDNA derived from the mRNA is as follows:

[AGCACCTTCGGGATGAATCAGGCAACAGCTACTCTCCTG] SEQ ID NO: 1 agcaccttcg

ggatgaatca ggcaacagct actctcctg. The forward primer for the cDNA amplification is an

oligodeoxynucleotide having a nucleotide sequence: [5' –AGCACCTTCGGGATGAATC-3']

SEQ ID NO: 2 agcaccttcg ggatgaatc. The reverse primer for use with cDNA amplification is an

oligodeoxynucleotide having the following nucleotide sequence: [5'-

CAGGAGAGTAGCTGTTGCC-3'] SEQ ID NO: 3 caggagagta gctgtgcc. The distance between

the nucleotide binding sites on the target sequence is one nucleotide. The fluorescent dyes

applied to label the primers are Oregon Green 488 for the forward primer and Alexa 633 for the

reverse primer, both dyes having been obtained from Molecular Probes, Inc., of Eugene, Oregon.

The synthesis of the primers includes standard phosphoramidate solid phase synthesis including

use of an amino-modifier – deoxyribocytidine (dC) – CPG at the 3' end of the primer. The

Oregon Green 488 and Alexa 633 dyes, in the form of succinylimide (NHS) esters, are attached

to the forward and reverse primers, respectively, at the primary amino group at the 3' end

deoxyribocytidines (dC's) by NHS-primary amino conjugation, according to the manufacturer's

protocols. The 3' OH groups are left free, and are the starting points for polymerization. The

resulting labeled primers are purified by reverse phase high pressure liquid chromatography

(RP/HPLC) using a TEAA-acetonitrile solvent system. The primers are then lyophilized,

resuspended in deionized water, and the solution divided into 10 microliter doses having a

primer concentration in solution of about 5 micromoles per liter.

The monitoring of fluorescence emission during PCR and reverse transcription thermal

cycling were both performed in the LighCycler™ (Roche). The reaction vessel for both the

reverse transcription step and polymerase chain reaction is a capped, optically transparent